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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,722	07/15/2004	Paul Kunisch	2001P24245WOUS	4373

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Intellectual Property Department
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EXAMINER	
ANDREWS, LEON T	
ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/501,722	KUNISCH, PAUL	
	Examiner	Art Unit	
	Leon Andrews	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *7/15/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11-28 are rejected under 35 U.S.C. 102(b) as being anticipated by Henderson et al. (Patent Number: 6,101,216).

~~Claims 1-10 were cancelled.~~ no need for this

Regarding Claim 11, Henderson et al. discloses a data communication device adapted to exchange different signals with another data communication device using one and the same line (Fig. 2, subscriber line 52) and utilizing different frequency ranges (Fig. 2, DSL modem 54 transmits upstream signals in a lower frequency range and receive downstream signals in a higher frequency range, column 7, lines 61-63), the data communication device comprising:

a first signal exchange device (Fig. 2, DSL modem 56) that is activated if signals are to be exchanged with the other data communication device (Fig. 2, fax machine 81) utilizing a first frequency range (control circuit receives the downstream signals in a first frequency range, columns 4 and 5, lines 67 and 1 respectively); and

a second signal exchange device (Fig. 2, DSL modem 54) that is used in order to exchange signals with the other data communication device (Fig. 2, fax machine 81) utilizing a second frequency range (control circuit transmits the upstream signals in a second frequency range, columns 4 and 5, lines 67 and 1-2 respectively), wherein

the first signal exchange device (Fig. 2, DSL modem 56) will be activated even if signals are to be exchanged with the other data communication device (Fig. 2, fax machine 81) using the second signal exchange device (Fig. 2, DSL modem 54) and utilizing the second frequency range (second frequency range, column 5, lines 2) in order to avoid changes in line impedance (modem 54 compensate for impedance change such as telephone 80 being off-hook, by adjusting the data rates, gain characteristics and filter parameters, column 7, lines 44-49) that otherwise occur when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated and that disturb the signal exchange via the second frequency range (second frequency range, column 5, lines 2).

Regarding Claim 12, Henderson et al. discloses the data communication device according to claim 11, further comprising:

a determining device adapted to determine whether changes in line impedance (Equalizer 98 is an adaptive compensation circuit for counteracting distortions on line 52, column 8, lines

51-52) occurring when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated will lead to bit errors (ADSL modem adjusts transmission rates in accordance with errors received on the digital subscriber line wherein the data rate is decreased in response to error signals and increased when a mean square error is below a threshold, column 5, lines 42-47) or an high bit error rate during the signal exchange carried out using the second signal exchange device (Fig. 2, DSL modem 54) and utilizing the second frequency range (second frequency range, column 5, lines 2).

Regarding Claim 13, Henderson et al. discloses the data communication device according to claim 12 in which, when it is determined that changes in line impedance occurring when the first signal exchange device (Fig. 2, DSL modem 54) is activated or deactivated will lead to bit errors (ADSL modem adjusts transmission rates in accordance with errors received on the digital subscriber line wherein the data rate is decreased in response to error signals and increased when a mean square error is below a threshold, column 5, lines 42-47) or an high bit error rate, the first signal exchange device (Fig. 2, DSL modem 54) will be activated even if signals are to be exchanged with the other data communication device (Fig. 2, fax machine 81) using the second signal exchange device (Fig. 2, DSL modem 56) and utilizing the second frequency range (control circuit transmits the upstream signals in a second frequency range, columns 4 and 5, lines 67 and 1 respectively), and the first signal exchange device (Fig. 2, DSL modem 54) will otherwise only be activated if signals are to be exchanged with the other data communication device (Fig. 2, fax machine 81) using the first signal exchange device (Fig. 2, DSL modem 54) and utilizing the first frequency range (control circuit receives the downstream signals in a first

frequency range, columns 4 and 5, lines 67 and 1 respectively).

Regarding Claims 14, 15 and 16, Henderson et al. discloses the data communication device, wherein not the entire first signal exchange device (Fig. 2, DSL modem 56) but, instead, only a part thereof is activated in order to avoid changes in line impedance (impedance occurring on line 52 as a result of interference from POTS equipment, the digital signal processing rapidly adjust so communication latency are not noticeable, column 7, lines 44-52) that occur when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated and that disturb the signal exchange via the second frequency range (second frequency range, column 5, lines 2).

Regarding Claims 17, 18, 19 and 20, Henderson et al. discloses the data communication device in which for exchanging data using the second frequency range (second frequency range, column 5, lines 2) and for exchanging data using a third frequency range (audio range which affects POTS, column 3, lines 14-15) each of said frequency ranges (frequency ranges associated with ADSL signals, column 3, lines 12-13) is allocated a specific number of bits (DSL modems 54 and 56 communicate data at various constellation sizes ranging from 4 to 256 points, column 7, lines 55-56; constellation size of 4 points has a data rate of 680 Kbps, column 8, lines 8-9) or bit sequences.

Regarding Claim 21, Henderson et al. discloses the data communication device according to claim 20 in which, when it is determined that changes in line impedance (modem 54 compensate for impedance change such as telephone 80 being off-hook, by adjusting the data rates, gain

characteristics and filter parameters, column 7, lines 44-49) occurring when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated will lead to bit errors (ADSL modem adjusts transmission rates in accordance with errors received on the digital subscriber line wherein the data rate is decreased in response to error signals and increased when a mean square error is below a threshold, column 5, lines 42-47) or an excessively high bit error rate, the allocation of bits (DSL modems 54 and 56 communicate data at various constellation sizes ranging from 4 to 256 points, column 7, lines 55-56; constellation size of 4 points has a data rate of 680 Kbps, column 8, lines 8-9) or bit sequences to the second (second frequency range, column 5, lines 2) or third frequency range will be changed (modems 54 and 56 adjust the data rates to reach the data rate potential on subscriber line 52, column 11, lines 59-61).

Regarding Claims 22 and 23, Henderson et al. discloses the data communication device, wherein the transmission signals used for exchanging data are DSL signals (DSL signals, column 8, line 37).

Regarding Claims 24 and 25, Henderson et al. discloses the data communication device, wherein the signals sent using the first frequency range (first frequency range, columns 4 and 5, lines 67 and 1 respectively) are voice signals (POTS signals transmitted on subscriber line, column 5, lines 8-10).

Regarding Claim 26, Henderson et al. discloses a data communication device adapted to exchange different signals with another data communication device using one and the same line

(Fig. 2, subscriber line 52) and utilizing different frequency ranges (Fig. 2, DSL modem 54 transmits upstream signals in a lower frequency range and receive downstream signals in a higher frequency range, column 7, lines 61-63), the data communication device comprising:

a first signal exchange device (Fig. 2, DSL modem 56) that is activated if signals are to be exchanged with the other data communication device (Fig. 2, splitter 58) utilizing a first frequency range (control circuit receives the downstream signals in a first frequency range, columns 4 and 5, lines 67 and 1 respectively);

a second signal exchange device (Fig. 2, DSL modem 54) that is used in order to exchange signals with the other data communication device (Fig. 2, fax machine 81) utilizing a second frequency range (control circuit transmits the upstream signals in a second frequency range, columns 4 and 5, lines 67 and 1-2 respectively), and

a determining device for determining whether changes in line impedance (Equalizer 98 is an adaptive compensation circuit for counteracting distortions on line 52, column 8, lines 51-52) occurring when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated will lead to bit errors (ADSL modem adjusts transmission rates in accordance with errors received on the digital subscriber line wherein the data rate is decreased in response to error signals and increased when a mean square error is below a threshold, column 5, lines 42-47) or an high bit error rate during the signal exchange carried out using the second signal exchange device (Fig. 2, DSL modem 54) and utilizing the second frequency range (second frequency range, column 5, lines 2).

Regarding Claim 27, Henderson et al. discloses a method (method of the invention, column 12, lines 48-49) for data communication (data communication, column 9, line 26), comprising:

activating a first signal exchange device (Fig. 2, DSL modem 56) if signals are to be exchanged via a line (Fig. 2, subscriber line 52) using a first frequency range (first frequency range, columns 4 and 5, lines 67 and 1 respectively); and

determining whether changes in line impedance (Equalizer 98 is an adaptive compensation circuit for counteracting distortions on line 52, column 8, lines 51-52) occurring when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated will lead to bit errors (ADSL modem adjusts transmission rates in accordance with errors received on the digital subscriber line wherein the data rate is decreased in response to error signals and increased when a mean square error is below a threshold, column 5, lines 42-47) or an high bit error rate during a signal exchange carried out via the same line (Fig. 2, subscriber line 52) using the second signal exchange device (Fig. 2, DSL modem 54) and utilizing the second frequency range (second frequency range, column 5, lines 2).

Regarding Claim 28, Henderson et al. discloses a method (method of the invention, column 12, lines 48-49) for data communication (data communication, column 9, line 26), comprising:

activating a first signal exchange device (Fig. 2, DSL modem 56) if signals are to be exchanged via a line (Fig. 2, subscriber line 52) using a first frequency range (first frequency range, columns 4 and 5, lines 67 and 1 respectively); and

activating the first signal exchange device (Fig. 2, DSL modem 56) even if signals are to be exchanged via the line (Fig. 2, subscriber line 52) using a second signal exchange device (Fig.

2, DSL modem 54) and utilizing a second frequency range (second frequency range, column 5, lines 2) in order to avoid changes in line impedance (modem 54 compensate for impedance change such as telephone 80 being off-hook, by adjusting the data rates, gain characteristics and filter parameters, column 7, lines 44-49) that otherwise occur when the first signal exchange device (Fig. 2, DSL modem 56) is activated or deactivated and that disturb the signal exchange via the second frequency range (second frequency range, column 5, lines 2).

Citation of Pertinent Prior Art

2. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Lysejko et al. (Patent No.: US 6,298,246 B1) discloses subscriber terminal and method for passing control signals between a first and second signal processing units.

Balachandran et al. (Patent No.: US 6,324,268 B1) discloses splitter-less digital subscriber loop modems with improved throughput and voice and data separation.

Kim (Pub No.: US 2002/0101882 A1) discloses transmission of voice and information signals in a single line.

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leon Andrews whose telephone number is (571) 270-1801. The examiner can normally be reached on Monday through Friday 7:30 AM to 5:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rao S. Seema can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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September 26, 2007